

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)				Docket No. AMAT/1931.P1		Serial No. 10/052,681		
LISTS OF PATENTS AND PUBLICATIONS CITED BY APPLICANT				Applicant Xi, et al.		Confirmation No.: 4083		
(Use several sheets if necessary)				Filing Date January 17, 2002		Group 2814		
U.S. Patent Documents								
Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
<i>GP</i>	A14	6,164,138	12-26-2000	Blake, et al.	73	732	03-31-1998	
<i>GP</i>	A15	6,164,128	12-26-2000	Santa Cruz, et al.	73	170.11	10-13-1999	
<i>GP</i>	A16	6,157,081	12-05-2000	Nariman, et al.	257	752	03-10-1999	
<i>GP</i>	A17	6,157,061	12-05-2000	Kawata	257	316	08-27-1998	
<i>GP</i>	A18	6,143,646	11-07-2000	Wetzel	438	637	06-03-1997	
<i>GP</i>	A19	6,023,102	02-08-2000	Nguyen, et al.	257	774	10-08-1998	
<i>GP</i>	A20	6,017,817	01-25-2000	Chung, et al.	438	637	05-10-1999	
<i>GP</i>	A21	5,993,916	11-30-1999	Zhao et al.	427	535	09-22-1997	
<i>GP</i>	A22	5,930,669	07-27-1999	Uzoh	438	627	04-03-1997	
<i>GP</i>	A23	5,846,332	12-08-1998	Zhao et al.	118	728	07-12-1996	
<i>GP</i>	A24	5,674,787	10-07-1997	Zhao, et al.	437	230	01-16-1996	
<i>GP</i>	A25	5,654,232	08-05-1997	Gardner	438	661	03-15-1996	
<i>GP</i>	A26	5,613,296	03-25-1997	Kurino et al.	29	852	04-13-1995	
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Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B4							
	B5							
	B6							
OTHER ART								
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<i>GP</i>	C4	✓	Tadashi Iijima, Yoshiakai Shimooka, and Kyoichi Suguro, "An Amorphous Ti-Si-N Diffusion Barrier Layer for Cu Interconnections," Vol. 78, No. 12, 1995, pages 67-74					
<i>GP</i>	C5	✓	Mikagi H. Ishikawa, T. Usami, M. Suzuki, K. Inoue, N. Oda, S. Chikaki, I. Sakai and T. Kikkawa. "Barrier Metal Free Copper Damascene Interconnection Technology Using Atmospheric Copper Reflow and Nitrogen Doping in SiOF Film. 1996 IEEE. Pp. 365-368					
<i>GP</i>	C6	✓	Y. Shacham-Diamand, V. Dubin, and M. Angyal "Electroless Copper Deposition for ULSI" 1995 Elsevier Science S.A., pp. 93-103					
Examiner	<i>GP</i> <i>Risatta</i>			Date Considered <i>6/1/03</i>				
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								

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Q/P	A2	6,274,483	08-14-2001	Chang, et al.	438	640	01-18-2000
Q/P	A3	6,271,592	08-07-2001	Kim, et al.	257	751	08-06-1999
Q/P	A4	6,271,084	08-07-2001	Tu, et al.	438	253	01-16-2001
Q/P	A5	6,268,283	07-31-2001	Huang	438	638	02-09-1999
Q/P	A6	6,265,757	07-24-2001	Brady, et al.	257	623	11-09-1999
Q/P	A7	6,229,174	05-08-2001	Parekh	257	306	12-08-1997
Q/P	A8	6,221,775	04-24-2001	Ference, et al.	438	691	09-24-1998
Q/P	A9	6,211,071	04-03-2001	Lukanc, et al.	438	640	04-22-1999
Q/P	A10	6,200,433	03-13-2001	Ding, et al.	204	192.15	11-01-1999
Q/P	A11	6,184,138	02-06-2001	Ho, et al.	438	687	09-07-1999
Q/P	A12	6,184,128	02-06-2001	Wang, et al.	438	637	01-31-2000
Q/P	A13	6,166,423	12-26-2000	Gambino, et al.	257	532	10-22-1999

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							YES	NO
Q/P	B1	JP 08-213,119 Abstract Only	07-24-1996	JP	H01L	21/768		X
	B2							
	B3							

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Q/P	C1	R.F. Bunshah, "Handbook of Deposition Technologies for Films and Coatings", 2 nd edition, Noyas Publications, NJ, USA, 1994, 261, 321-325.
Q/P	C2	Gardner et al., "Encapsulated Copper Interconnection Device using Sidewall Barriers", Thin Solid Films 262 (1995) 104-119.
Q/P	C3	Jang et al., "Tantalum and Niobium as a Diffusion Barrier between Copper and Silicon", J. Materials Science: Materials in Electronics 7 (1996) 271-278.

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Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
<i>Q</i>	A27	5,565,029	10-15-1996	Takasu	117	1	03-31-1995	
<i>Q</i>	A28	5,534,460	07-09-1996	Tseng et al.	437	187	04-27-1995	
<i>Q</i>	A29	5,486,492	01-23-1996	Yamamoto et al.	437	192	10-29-1993	
<i>Q</i>	A30	5,371,042	12-06-1994	Ong	437	194	06-16-1992	
<i>Q</i>	A31	5,354,712	10-11-1994	Ho et al.	437	195	11-12-1992	
<i>Q</i>	A32	5,308,793	05-03-1994	Taguchi et al.	437	194	07-22-1992	
<i>Q</i>	A33	5,186,718	02-16-1993	Tepman, et al.	29	25.01	04-15-1991	
<i>Q</i>	A34	5,178,739	01-12-1993	Barnes et al.	204	192.12	09-25-1991	
<i>Q</i>	A35	4,962,060	10-09-1990	Sliwa, et al.	437	192	05-02-1989	
<i>Q</i>	A36	4,951,601	08-28-1990	Maydan, et al.	118	719	06-23-1989	
	A37							
	A38							
	A39							
Foreign Patent Documents								
Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B07							
	B08							
	B09							
OTHER ART								
Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.						
<i>Q</i>	C7	Electromigration and Diffusion in Pure Cu and Cu(Sn) Alloys. C. K. Hu, K. L. Lee, D. Gupta, and P. Blauner, Mat. Res. Soc. Symp. Vol 427 (96-105)						
<i>Q</i>	C8	Electromigration Failure Distributions for Multi-Large Interconnects as a Function of Line Width Experiments and Simulation, D.D. Brown, J.E. Sanchez, Jr., V. Pham, P.R. Besser, M.A. Korhonen, and C.Y. Li, Mat Res. Soc. Symp. Vol 427						
<i>Q</i>	C9	USSN Serial No.: 09/635,738, Chen, et al., "Barrier Layer Structure for Copper Metallization and Method of Forming the Structure," Filed: August 09, 2000.						
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